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In Re Application Of: Ronald L. Carr

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08/952,001

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November 7, 1997

Examiner

A. Pickard

Group Art Unit

3626

Title: JOINT ASSEMBLY EMPLOYING A MULTI-RING GASKET

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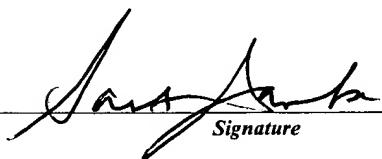
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PATENT EXAMINING OPERATIONS

27 Brief  
JCS  
13/9/02

Applicant: Ronald L. Carr Group Art Unit: 3626

Serial No.: 08/952,001 Examiner: Alison Pickard

Filed: November 7, 1997 Docket No.: P 97 194.024

Title: JOINT ASSEMBLY EMPLOYING MULTI-RING GASKET

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April 22, 2002

Board of Patent Appeals and Interferences  
Washington, DC 20231

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Greetings:

This Appeal Brief is being filed in connection with the rejection of the above-captioned patent application, mailed November 21, 2001. (Paper No. 25)

(1) ***Real Party in Interest.***

The real party in interest is KC Multi-Ring, Inc.

(2) ***Related Appeals and Interferences.***

APPEAL BRIEF (08/952,001)

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There are no related appeals or interferences.

(3) *Status of Claims.*

Claims 55, 60 - 62, 66 - 69, 73 - 78, 82 - 85, and 87 stand rejected.

Claims 56-58 and 88-92 are allowed.

Claims 59, 63-65, 70-72, 79-81, and 86 are objected to.

(4) *Status of Amendments.*

No Amendment was filed subsequent to the rejection of November 21, 2001.

(5) *Summary of the Invention.*

The invention of claim 55 reads on the specification and drawings as follows:

55. A gasket (e.g., 70 at page 15, line 29, Figure 11) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 16 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing and formed in a loop and having an outer periphery (e.g., 72 at page 15, line 30, Figure 11);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 31, Figure 11); and

at least one spoke of said sealing material extending between said first strip and said second strip wherein remaining spaces therebetween are substantially void (e.g., 77 at page 15, line 32, Figure 11).

The invention of claim 60 reads on the specification and drawings as follows:

60. A gasket (e.g., 92 at page 16, line 15, Figure 13 or 70 at page 15, line 29, Figure 11) for providing a seal at the joint between a pair of pipe flanges (e.g., 12, 16 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery (e.g., 72 at page 15, line 30, Figure 13 or 74 at page 15, line 31, Figure 11);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 32, Figure 13 or 76 at page 15, line 31, Figure 11); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 13 or 78 at page

15, line 34, Figure 11), the gasket further comprising an open alignment spoke of said sealing material extending outwardly from said second strip (e.g., 94 at page 16, line 17, Figure 13), said open alignment spoke defining an alignment concavity (e.g., 96 at page 16, line 18, Figure 13) for placement adjacent a fastener.

The invention of claim 61 reads on the specification and drawings as follows:

61. The gasket of claim 60, further comprising a centering shelf (e.g., 162 at page 19, line 8, Figure 24) of said sealing material depending from said open alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges (e.g., 164 at page 19, line 11, Figure 24).

The invention of claim 62 reads on the specification and drawings as follows:

62. The gasket of claim 61, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges (e.g., 164, 166 at page 19, line 11, Figure 24), wherein the outer periphery of said second strip (e.g., 152 at page 18, line 37, Figure 24) is substantially congruent with the outer periphery of the smaller flange (164 at page 19, line 11, Figure 24), and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange (166 at page

19, line 11, Figure 24).

The invention of claim 66 reads on the specification and drawings as follows:

66. The gasket of claim 60, wherein said first (e.g., 76 at page 15, line 31, Figure 11) and second (e.g., 74 at page 15, line 31, Figure 11) strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop (e.g., 72 at page 15, line 30, Figure 11), said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke (e.g., 77 at page 15, line 32, Figure 11) of said sealing material extending between said third strip and said first strip.

The invention of claim 67 reads on the specification and drawings as follows:

67. A gasket (e.g., 90 at page 16, line 10, Figure 12 or 70 at page 15, line 29, Figure 11) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 14 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery (e.g., 72 at page 15, line 30, Figure 12 or 74 at page 15, line 31, Figure 11);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 31, Figure 12 or 76 at page 15, line 31, Figure 11); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 11 or 12), the gasket further comprising a closed alignment spoke (e.g., 78 at page 15, line 33, Figure 11 or 12) of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture (80 at page 15, line 35) therethrough for receiving a bolt.

The invention of claim 68 reads on the specification and drawings as follows:

68. The gasket of claim 67, further comprising a centering shelf (e.g., 162 at page 19, line 8, Figure 25) of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

The invention of claim 69 reads on the specification and drawings as follows:

69. The gasket of claim 68, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges (e.g., 164, 166 at page 19, line 11, Figure 24), wherein the outer periphery of said second strip (e.g., 152 at page 18, line 37, Figure 24) is substantially congruent with the outer periphery of the smaller flange (164 at page 19, line 11, Figure 24), and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange (166 at page 19, line 11, Figure 24).

The invention of claim 73 reads on the specification and drawings as follows:

73. The gasket of claim 67, wherein said first (e.g., 76 at page 15, line 31, Figure 11) and second (e.g., 74 at page 15, line 31, Figure 11) strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop (e.g., 72 at page 15, line 30, Figure 11), said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke (e.g., 77 at page 15, line 32, Figure 11) of said sealing material extending between said third strip and said first strip.

The invention of claim 74 reads on the specification and drawings as follows:

74. The gasket of claim 67, wherein said closed alignment spoke has a tab portion (e.g., 160 at page 19, line 6, Figure 24 or 144 at page 19, line 5, Figure 25) that extends beyond the outer

peripheries of the flanges.

The invention of claim 75 reads on the specification and drawings as follows:

75. The gasket of claim 74, wherein said tab portion includes identification data (disclosure in claims as filed).

The invention of claim 76 reads on the specification and drawings as follows:

76. The gasket of claim 60, further comprising a closed alignment spoke (e.g., 78 at page 15, line 33, Figure 11 or 12) of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture (80 at page 15, line 35) therethrough for receiving a bolt.

The invention of claim 77 reads on the specification and drawings as follows:

77. The gasket of claim 76, further comprising a centering shelf (e.g., 162 at page 19, line 8, Figure 25) of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

The invention of claim 78 reads on the specification and drawings as follows:

78. The gasket of claim 77, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges (e.g., 164, 166 at page 19, line 11, Figure 24), wherein the outer periphery of said second strip (e.g., 152 at page 18, line 37, Figure 24) is substantially congruent with the outer periphery of the smaller flange (164 at page 19, line 11, Figure 24), and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange (166 at page 19, line 11, Figure 24).

The invention of claim 82 reads on the specification and drawings as follows:

82. A gasket (e.g., 70 at page 15, line 29, Figure 11 or 92 at page 16, line 15, Figure 13) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 14 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery (e.g., 72 at page 15, line 30, Figure 11 or 13);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 31, Figure 11 or 13); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 11 and 13), further comprising an open alignment spoke (e.g., 94 at page 16, line 17, Figure 13) of said sealing material extending outwardly from said second strip, said open alignment spoke defining an alignment concavity (96 at page 16, line 18) for placement adjacent a fastener, further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip (e.g., 78 at page 15, line 33, Figure 12), wherein said closed alignment spoke includes an aperture (80 at page 15, line 35) therethrough for receiving a bolt, wherein said first and said second strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop (e.g., 72 at page 15, line 30, Figure 11), said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke (77 at page 15, line 32, Figure 11) of said sealing material extending between said third strip and said first strip.

The invention of claim 83 reads on the specification and drawings as follows:

83. The gasket of claim 76, wherein said closed alignment spoke has a tab portion (e.g., 160 at page 19, line 5, Figure 24) that extends beyond the outer peripheries of the flanges.

The invention of claim 84 reads on the specification and claims as follows:

84. The gasket of claim 83, wherein said tab portion includes identification data (disclosure in original claims).

The invention of claim 85 reads on the specification and drawings as follows:

85. A gasket (e.g., 102 at page 16, line 32, Figure 15 or 98 at page 16, line 25, Figure 14) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 14 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of sealing material formed in a loop and having an outer periphery (e.g., 72 at page 15, line 30, Figure 14 or 15);

a second strip of said sealing material formed in a loop and having an outer periphery and inner periphery greater than said outer periphery of said first strip (e.g., 100 at page 16, line 27, Figure 14 or 15); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 14 or 15) wherein remaining spaces therebetween are substantially void, and

wherein said outer periphery of said first strip is substantially circular and said outer periphery of said second strip is substantially square (Figure 14 or 15).

The invention of claim 87 reads on the specification and drawings as follows:

87. The gasket of claim 85, further comprising at least one closed alignment spoke of said sealing material extending outwardly from said second strip (78 at page 15, line 33, Figure 14), said alignment spoke including an aperture (80 at page 15, line 35) therethrough for receiving a bolt.

**(6) *Issues.***

1. Whether claim 55 is obvious under 35 U.S.C. § 103(a) in view of Merwarth, U.S. Patent No. 605,891.
2. Whether claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are obvious under 35 U.S.C. § 103(a) in view of Mastin, U.S. Patent No. 1,245,002, and further in view of Smith, U.S. Patent No. 4,002,344.
3. Whether claim 85 is obvious under 35 U.S.C. § 103(a) in view of Mastin, U.S. Patent No. 1,245,002.

(7) *Grouping of Claims.*

Where the grounds of rejection concern more than one claim, the claims are deemed to stand or fall with the broadest claim, for the purpose of this appeal only.

(8) *Argument.*

Issue 1.

Whether claim 55 is obvious under 35 U.S.C. § 103(a) in view of Merwarth, U.S. Patent No. 605,891.

The rejection is based on Merwarth, U.S. Patent No. 605,891 ("Merwarth '891"). The Office Action states that it would have been obvious and a mere design choice to form the first and second strips and the spokes of Merwarth '891 of the same material because "[i]t is not considered inventive to select a known material base[d] on its suitability for its intended use. See *In re Leshin*. 125 USPQ 416 (CCPA 1960)." The Office Action further states that, since the first and second strips and the spokes all function as seals, it would have been obvious to use the same material for the same function, and that it would have been obvious to make the entire gasket of the same material in order to "ease manufacturing." See pgs. 2-3 of the Office Action ("OA").

Errors in the Rejection

It should be noted immediately that Merwarth '891 was reissued as U.S. Re 11,858 ("Merwarth '858"). Merwarth '858 corrects defects in the specification and the drawings in Merwarth

'891. In regard to the effect of a reissue patent, MPEP 1460 states:

[t]he effect of the reissue of a patent is stated in 35 U.S.C. 252. With respect to the Office treatment of the reissued patent, the reissued patent will be viewed as if the original patent had been originally granted in the amended form provided by the reissue.

According to the MPEP the Patent Office should, therefore, treat Merwarth '891 patent as though its disclosure was amended by that of Merwarth '858.

Merwarth '858 states that:

...the inner one [wire], A, being formed of copper or other soft metal and being preferably of larger wire than the outer ring B. The outer ring [B] is composed of harder metal than the inner one and is preferably formed from wire of a smaller size than the inner ring. The wire of the outer ring [B] has sufficient length so that eyes C can be formed at intervals. See pg. 1, lines 59-70 and pg. 2, lines 15-21.

Inner ring c in Figures 3 and 4 of the '891 patent is referred to as inner ring A in Merwarth '858, outer ring c<sup>3</sup> is referred to as outer ring F, and eyelets c<sup>2</sup> are referred to as eyelets C. See Appendix B. Also, in Merwarth '858 the outer ring B is formed into the eyelets C meaning that they are the same wire.<sup>1</sup>

Merwarth '858 teaches that the inner ring A is formed of a softer metal than the outer ring B (and therefore C), and that the wire of the inner ring A has a larger diameter than the wire of outer ring B. This structure is indicated as being the preferred embodiment. See pg. 1, lines 61-70. Outer ring F is also made of a larger diameter soft metal. See pg. 2, lines 25-27.

Rings A and B have opposite characteristics because they have different functions. Ring A is

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<sup>1</sup> The Office Action states that the inner ring B is analogous to the first strip of claim 60, the outer ring F is analogous to the second strip, and the eyelets C are analogous to the spokes.

designed to bear the force of the flange first so that it can compress and “take the impressions of such surfaces of flanges, which surfaces are usually rough, and to fill up inequalities in such surfaces.” Pg. 1, lines 87-90. On the other hand, Ring B and eyelets C are designed “to sustain the soft ring [A] against any pressure which might tend to distort or rupture it....” Pg. 2, lines 2-6.

According to MPEP 2143.01, it cannot be considered obvious to modify a reference such that it no longer functions to achieve its intended purpose or so as to change its principle of operation. Therefore, the physical characteristics of the ring B and eyelets C can be modified as proposed only if, after the change, the gasket functions as described above. However, if the ring B and eyelets C were made of the same soft metal as the ring A, they would not be strong enough to sustain the soft ring A against pressure which would tend to distort or rupture it. Thus, the proposed modification to the ring B would prevent the gasket from achieving its intended purpose of sustaining the ring A against rupture and would change its principle of operation (the ring B protecting the ring A), which does not comply with MPEP 2143.01.

Merwarth '858 states that eyelets C (and therefore ring B) “can be made of the same size wire as said rings A and F and of soft metal.” Pg. 2, lines 26-31. The reference does not state the ring B can or should be made of the same soft metal as the rings A and F, and there is a reason for this: making rings A and B of the same soft metal would render ring B not capable of sustaining the soft ring A from pressure that tends to rupture or distort the soft ring A. Therefore, Merwarth '858 teaches away from making the rings A and B from the same soft metal. *See* MPEP 2141.02.

Even if Merwarth '891 were considered by the Office (contrary to MPEP 1460) not to have had its disclosure amended by Merwarth '858 and, therefore, to be just another piece of prior art, its

teachings would have to be weighed along with the teachings of Merwarth '858 to determine the teachings of the prior art "as a whole" as required by MPEP 2143.01. Where the teachings of two prior art references conflict, the Examiner must weigh the suggestive power of each reference, considering "the degree to which one reference might accurately discredit another." *Id.*

It is submitted that the teachings of an original patent, wherever they would conflict with the teachings of a reissue of that patent, would have to be considered discredited by, and therefore less credible than, the teachings of the Reissue patent. This is true here at least because the Reissue patent is an acknowledgment, by the teacher, that the original teachings were incorrect or defective with respect to those of the Reissue patent. Therefore, a rational person of ordinary skill in the art would necessarily choose Merwarth '858 over Merwarth '891 for any teaching that differs between the two. As shown above, Merwarth '858 teaches against the invention.

Notwithstanding, the proposed modification is not even obvious in view of the teachings of Merwarth '891. At page 2, line 24, Merwarth '891 begins to describe a packing device that consists of an inner soft-metal ring  $c^9$  and an "inclosing" holder or retaining-ring  $c'$ , having integral eyes or loops  $c^2$ , and an outer soft-metal ring  $c^3$ , the latter encircling the loops or eyes  $c^2$  and soldered or otherwise secured thereto. The reference states that "[i]t may be desirable . . . in some cases to form the loops or eyes  $c^2$  of a soft-metal rod or wire of the same size as the soft-metal rings  $c$   $c^3$  . . ." Page 2, lines 44 - 48.

Nowhere in the above referenced teaching can it be said that Merwarth '891 teaches or suggests making the loops or eyes of the same soft metal as the soft metal rings. If the reference had intended to make this teaching or suggestion, it could easily have stated that "it may be desirable to

form the loops or eyes . . . of the same soft-metal rod or wire as the soft metal rings.” The reference declined to make such a statement, and in view of the teachings of Merwarth ’858, the reason for this is apparent as discussed above.

For all of the above reasons, the proposed modification to Merwarth cannot be considered to have been obvious at the time the invention was made.

In regard to the assertion in the Office Action that, “[i]t is not considered inventive to select a known material base[d] on its suitability for its intended use,” selecting the same material for the rings A and B of Merwarth ’858 would render the reference unsuitable for its intended use. As mentioned above, one of the intended uses of the ring B is to protect the ring A against rupture, and ring B would be less effective to protect ring A against rupture if it were made of the same soft metal material. To the contrary, Merwarth ’858 suggests that ring B should be formed of a stronger (i.e., harder) material, and it cannot be considered obvious to modify a reference to make it unsatisfactory for its intended purpose. MPEP 2143.01.

To the extent Merwarth ’891 is considered for its teachings, notwithstanding that it should be considered to be trumped by the teachings of Merwarth ’858, it should be remembered that a reissue patent application cannot add new matter. 37 CFR §1.173(a). Therefore, nothing in Merwarth ’858 is new matter, and all that is stated in Merwarth ’858 must be inherent in Merwarth ’891, including the teaching in Merwarth ’858 that the ring B should be formed of a different material than the soft metal of the ring A in order to prevent rupture of the ring A.

In regard to the assertion in the Office Action that it would have been obvious to form all of the parts of Merwarth of the same sealing material to “ease manufacturing,” it would not be obvious to form

the rings A and B of Merwarth '858 from the same material when Merwarth '858 teaches (as explained above) that the gasket would in that case perform less adequately.

Even if it were true that forming all the parts of Merwarth '891 of the same sealing material is not contrary to the teachings of Merwarth '891, the teachings of Merwarth '858 trump the teachings of Merwarth '891 for the reasons discussed above. Moreover, there are many ways to "ease manufacturing," and the Office Action provides no argument why the particular structure of Applicant's claim 55 should be considered the obvious solution to that problem in view of what is taught in Merwarth '891 in conjunction with a known desire in the art to "ease manufacturing." If anything, it was so well-known to strive to "ease manufacturing," and such a long-felt need, that the failure of the prior art to modify either Merwarth reference as claimed by Applicant in view of this well known desire or need is convincing evidence that Applicant's invention could not have been obvious. MPEP 2141.01 states: "objective evidence or secondary considerations such as . . . long-felt need, . . . must be considered [as evidence of nonobviousness] in every case in which they [sic] are present." Please take judicial notice of the fact that striving to reduce manufacturing costs is and always has been a need recognized by manufacturers, from which fact it is respectfully submitted that the aforementioned is the only logical conclusion.

Finally, the Office Action asserts that forming all of the claimed parts of the same sealing material would have been nothing more than a mere design choice, by which it must be taken (in the absence of clarity) to mean that Applicant's claimed structure is alleged to be just one choice among several alternatives any one of which could have been made as well as any other.

No reason has been offered for the assertion that what Applicant has claimed is nothing more

than a mere design choice. Moreover, there is no citation to anyplace in the MPEP authorizing a rejection on such a basis even if the assertion were correct. MPEP 2144.04 appears to be the only likely candidate, but it only states that features relating to ornamentation only, which have no mechanical function, cannot be relied upon to patentably distinguish the claimed invention. The Examiner's own assertion that modifying Merwarth according to the claimed invention would "ease manufacturing" is an acknowledgment that the claimed subject matter does not relate to ornamentation only, so MPEP 2144.04 cannot apply. In addition, Applicant's specification is clear that the invention provides for improved sealing, which is another non-ornamental feature rendering MPEP 2144.04 inapposite.

#### Why Claim 55 is Not Obvious

Claim 55 is not obvious and is therefore patentable at least because it recites particular elements all of which must be formed of the same said sealing material.

#### Issue 2.

Whether claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are obvious under 35 U.S.C. § 103(a) in view of Mastin, U.S. Patent No. 1,245,002 and further in view of Smith, U.S. Patent No. 4,002,344.

The rejection is based on Mastin, U.S. Patent No. 1,245,002 in view of Smith, U.S. Patent No. 4,002,344. The Office Action states that it would have been obvious:

to include an open or closed alignment spoke as taught by Smith extending from the

second strip [*j* of Mastin] out of the sealing material to provide a gasket which can be properly aligned between a variety of different sized flanges which would provide an efficient seal at the inner and outer edges of the flanges as well as around the bolt holes. See pg. 4.

Errors in the Rejection.

According to the MPEP 2143, one requirement of a *prima facie* case of obviousness is that “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings.” This criterion is further explained in MPEP 2143.01 (Suggestion or Motivation To Modify the References), which explains that there is no suggestion or motivation to combine the references if the proposed modification would render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

As will be explained below, including alignment spokes that extends from the second strip *j* of Mastin gasket would not achieve the inventor’s intended purpose of providing an efficient seal around the bolt holes.

In order to properly align the gasket in Smith between a variety of different flanges, a ring-shaped locator 41 having lugs 43 extending from its inside diameter is snapped into a groove 33 in the edge of the gasket. In addition, ears 46 and 51 extend from the outside diameter of the locator. Apertures 47 and 52 on the ears are placed over bolt holes 16a in the flanges which center the gasket with respect to the bolt holes and ensure that the gasket is centered in relation to the central axis of the pipe to create an efficient seal. According to the teachings of Smith, sealing around the bolt holes is not necessary for an efficient seal, see Figure 1.

In contrast to Smith, the gasket in Mastin creates a uniform, hermetic seal by providing ribs *i*' that seal around the bolt holes and center the gasket. The gasket forms an efficient seal by providing ribs or ridges, *g*', *j*, *i*' and *k*, of different heights and thickness in order to account for the different pressures to which different parts of the gasket will be subject so that a uniform, hermetic seal is produced. See pg. 2, lines 46-56. Mastin teaches that sealing around the bolt holes is necessary for an efficient seal. However, as shown in the Figure of Appendix C, if the locator of Smith is "extending from the second strip *j*" in Mastin so that the Mastin gasket could be used in conjunction with larger size flanges, the apertures in the locator would fit around the bolt holes and not around the not the rib *i*, therefore the bolt holes would not be sealed which is contrary to the teachings and purpose of Mastin. Thus, there is no motivation to combine the two references.

Moreover, even if Smith and Mastin were combined, the combination would not yield the claimed invention. The claimed invention requires that all of the claimed parts are formed of the same sealing material, and that there is no teaching in Smith to form the locator ring that allegedly would have been obvious to add to Mastin of any kind of sealing material. To the contrary, it is clear from Figure 1 of Smith that the locator ring performs no sealing function, because it makes no contact with the flanges. Moreover, Smith teaches that the locator ring is formed separately from the seal ring 21, so there is no reason to suppose it is formed of the same material. Moreover, Smith teaches that parts of the locator ring are adapted to be "snapped off" after the flanges have been drawn tight (Col. 3, lines 25 - 27), which implies the locator ring should be formed of a relatively brittle material as opposed to being formed of the same material that is employed for sealing.

Why Claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are Not Obvious.

Claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are not obvious and are therefore patentable at least because they recite particular elements all of which must be formed of the same said sealing material.

Issue 3.

Whether claim 85 is obvious under 35 U.S.C. § 103 in view of Mastin, U.S. Patent No. 1,245,002.

The rejection is based on Mastin, U.S. Patent No. 1,245,002. In the rejection of claim 85, the Office Action stated that “[u]sing a square shape is considered a design choice as applicant has not stated that using a square rather than a circle solves any stated problem or is for any particular purpose....Further it appears that the circular shape of Mastin would perform equally as well.” Pg. 4

Errors in the Rejection

As Applicant has pointed out before, a square shape is utilized for the particular purpose of having the square corners of the gasket protrude from a round pipe flange, thus allowing the user to easily grasp the gasket for placing it between the pipe flanges. In order for a circular shape to be used more material would have to be employed in order to protrude, thereby increasing manufacturing costs. Therefore, it is more advantageous to use a square shape for the problem of grasping and a circular shape would not work equally as well.

It is asserted in the Office Action that the fact that the square shape is used for centering is not

claimed and the fact that there is no criticality supported in the specification as to the shape, renders the shape a mere design choice.

These assertions are contrary to case law and the MPEP. The entire record must be considered when making an obviousness rejection. Therefore, advantages that are not disclosed in the specification, but are argued by Applicant, cannot be disregarded. *In re Chu*, 66 F.3d 292, 298-99, 36 USPQ2d, 1089, 1094-95 (Fed. Cir. 1995). The requirement of considering the entire record in an obviousness rejection is stated in MPEP 716.02(f):

Although the purported advantage...was not disclosed in the specification, evidence and arguments rebutting the conclusion that such placement was a matter of "design choice" should have been considered as part of the totality of the record. "We have found no cases supporting the position that a patent application's evidence or arguments traversing a §103 rejection must be contained in the specification. There is no logical support for such a proposition as well, given that obviousness is determined by the totality of the record, including, in some cases most significantly, the evidence and arguments proffered during the give-and-take of *ex parte* patent prosecution." (Quoting *In re Chu* 66 F.3d at 299, 36 USPQ2d at 1095).

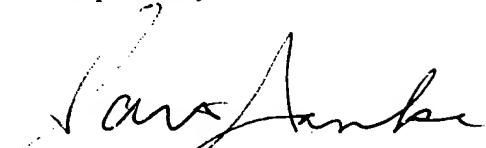
Applicant has provided the necessary arguments to show that the claimed shape of the square has an advantage to rebut the §103 rejection, and therefore, the claim should be allowed.

#### Why Claim 85 is Not Obvious.

Claim 85 is not obvious and is therefore patentable at least because it recites a square outer periphery.

For the reasons presented above, the Board is respectfully requested to reverse the rejections and direct the Examiner to pass this case to issue.

Respectfully, submitted



Garth Janke  
Reg. No. 40,662

## APPENDIX A

55. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing and formed in a loop and having an outer periphery;

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip wherein remaining spaces therebetween are substantially void.

60. A gasket for providing a seal at the joint between a pair of pipe flanges and for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery;

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip, the gasket further comprising an open alignment spoke of said sealing material extending outwardly from said second strip, said open alignment spoke defining an alignment concavity for placement adjacent a fastener.

61. The gasket of claim 60, further comprising a centering shelf of said sealing material depending from said open alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

62. The gasket of claim 61, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges, wherein the outer periphery of said second strip is substantially congruent with the outer periphery of the smaller flange, and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange.

66. The gasket of claim 60, wherein said first and second strips have corresponding inner

peripheries, the gasket further comprising a third strip of said sealing material formed in a loop, said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke of said sealing material extending between said third strip and said first strip.

67. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery;

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip, the gasket further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture therethrough for receiving a bolt.

68. The gasket of claim 67, further comprising a centering shelf of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

69. The gasket of claim 68, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges, wherein the outer periphery of said second strip is substantially congruent with the outer periphery of the smaller flange, and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange.

73. The gasket of claim 67, wherein said first and second strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop, said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke of said sealing material extending between said third strip and said first strip.

74. The gasket of claim 67, wherein said closed alignment spoke has a tab portion that extends beyond the outer peripheries of the flanges.

75. The gasket of claim 74, wherein said tab portion includes identification data.

76. The gasket of claim 60, further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture therethrough for receiving a bolt.

77. The gasket of claim 76, further comprising a centering shelf of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

78. The gasket of claim 77, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges, wherein the outer periphery of said second strip is substantially congruent with the outer periphery of the smaller flange, and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange.

82. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery;

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip, further comprising an open alignment spoke of said sealing material extending outwardly from said second strip, said open alignment spoke defining an alignment concavity for placement adjacent a fastener, further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture therethrough for receiving a bolt, wherein said first and said second strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop, said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke of said sealing material extending between said third strip and said first strip.

83. The gasket of claim 76, wherein said closed alignment spoke has a tab portion that extends beyond the outer peripheries of the flanges.

84. The gasket of claim 83, wherein said tab portion includes identification data.

85. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

a first strip of sealing material formed in a loop and having an outer periphery;

a second strip of said sealing material formed in a loop and having an outer periphery and inner periphery greater than said outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip wherein remaining spaces therebetween are substantially void, and wherein said outer periphery of said first strip is substantially circular and said outer periphery of said second strip is substantially square.

87. The gasket of claim 85, further comprising at least one closed alignment spoke of said sealing material extending outwardly from said second strip, said alignment spoke including an aperture therethrough for receiving a bolt.

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# APPENDIX B

No. 11,858.

Reissued Sept. 25, 1900.

C. H. MERWARTH.  
GASKET OR PACKING.  
(Application filed May 5, 1900.)

2 Sheets—Sheet 1.

Fig. 1.

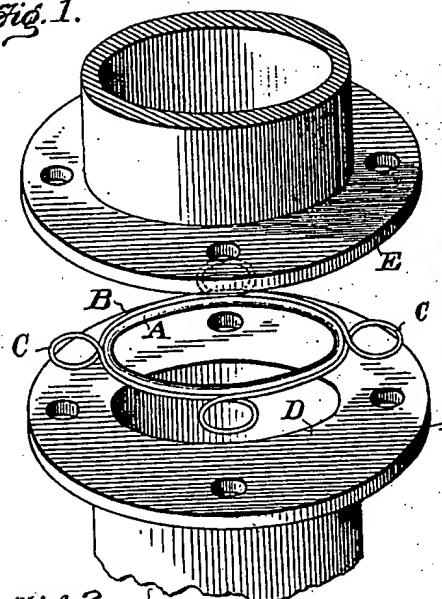


Fig. 3.

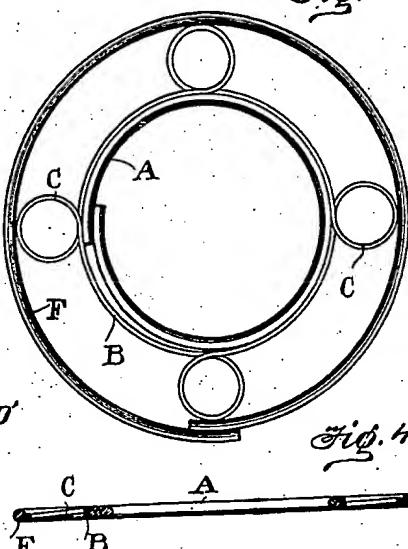


Fig. 2.



Fig. 4.

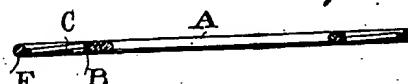


Fig. 5.

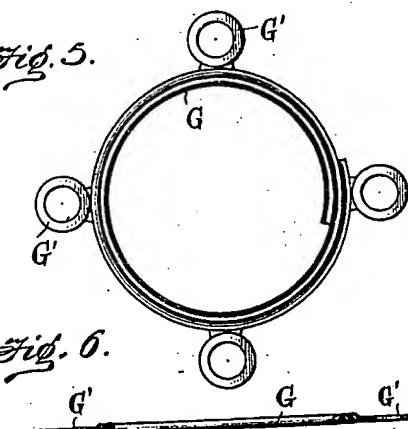
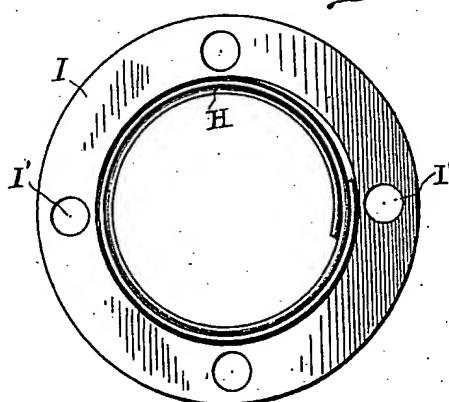


Fig. 6.



Fig. 7.



Witnesses:

Fenton & Cott

Henry L. Hazard

Inventor:  
Charles H. Merwirth  
by Prinde and Russell  
his Attorneys

# APPENDIX B

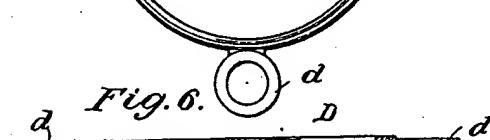
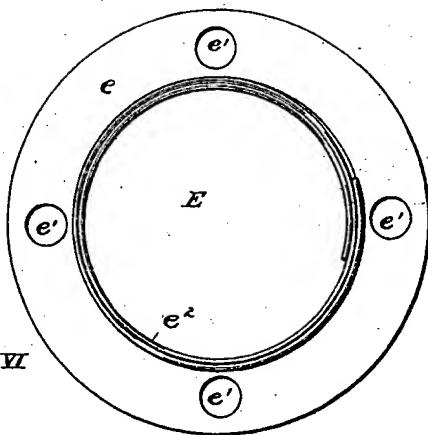
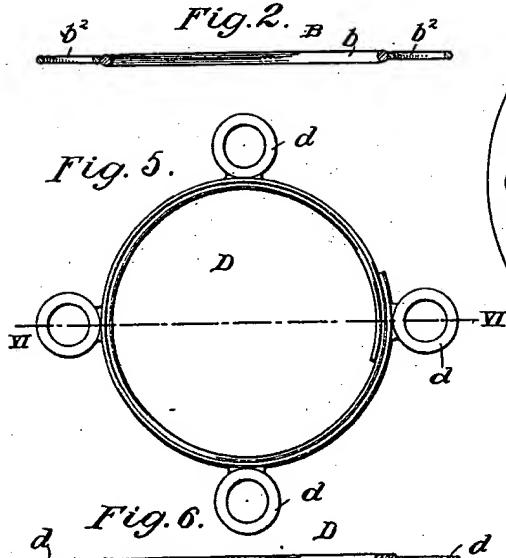
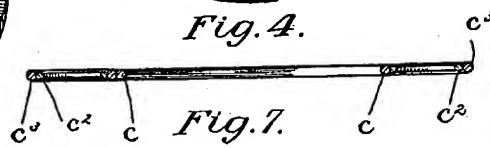
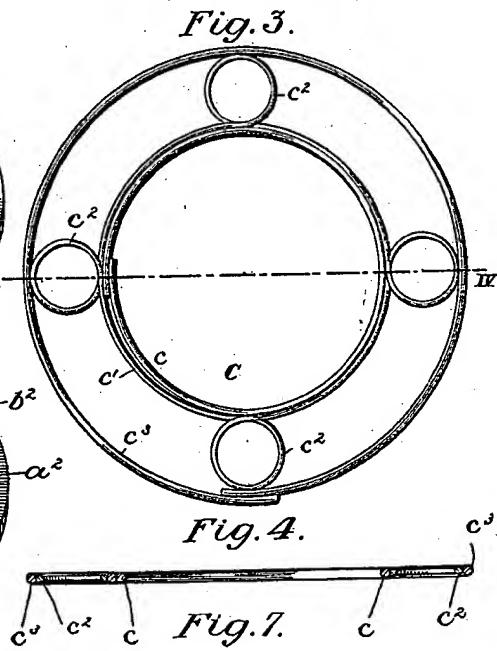
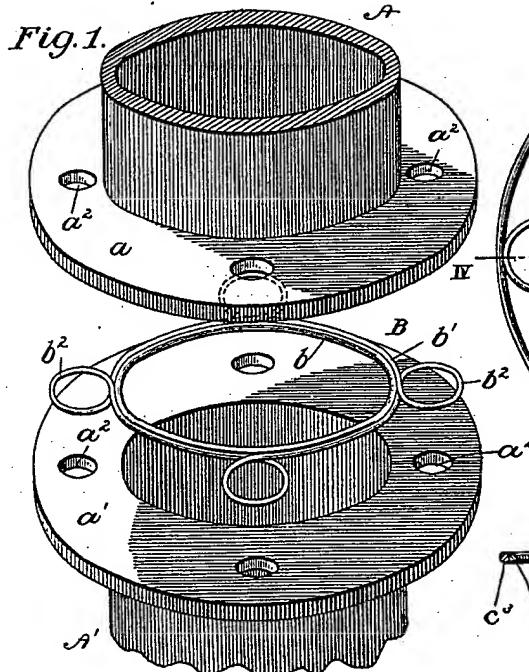
(No Model.)

2 Sheets—Sheet 1.

C. H. MERWARTH.  
STEAM PACKING.

No. 605,891.

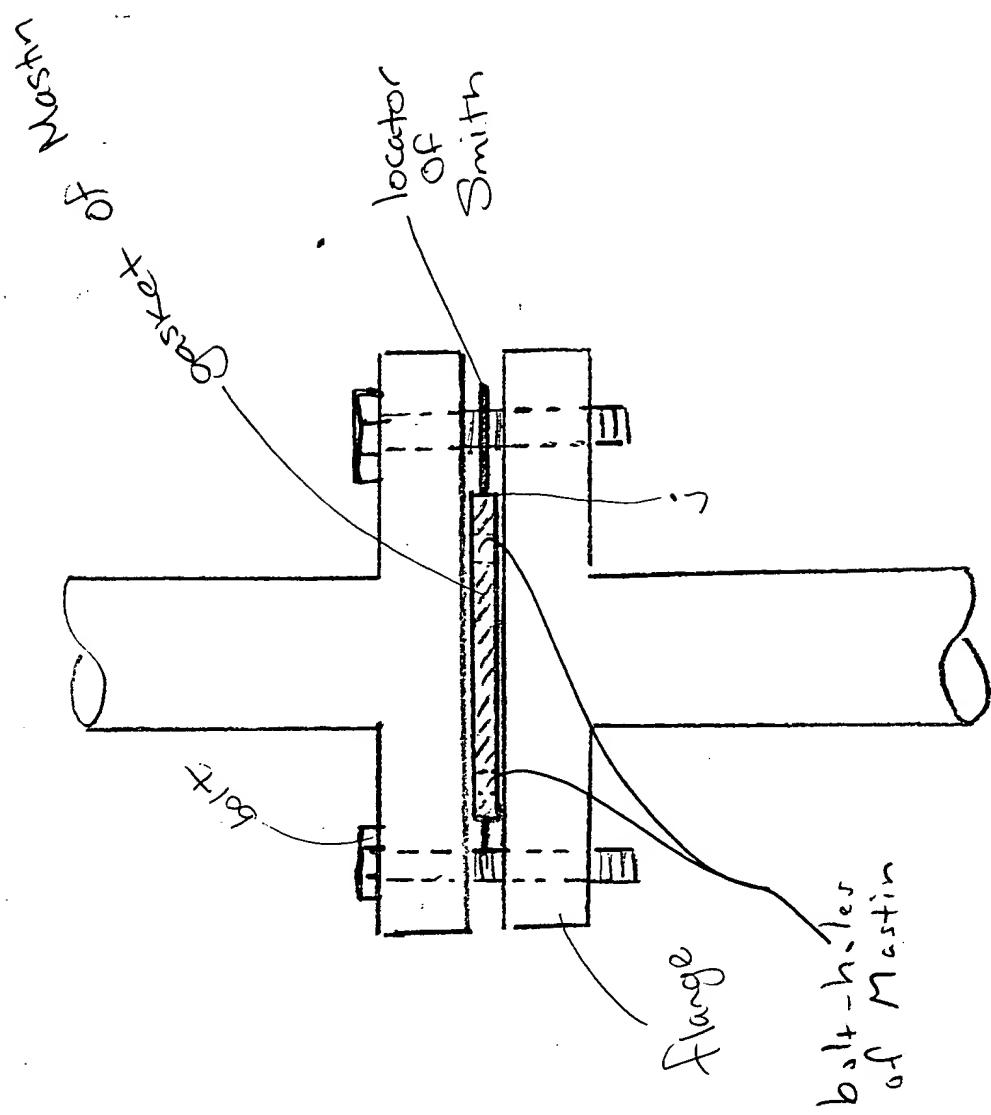
Patented June 21, 1898.



Witnesses.

Edw. O. Dowell, Jr.  
Chas. E. Riordan

Inventor.  
Charles H. Merwirth  
By John O. Dowell  
His Attorney.



## APPENDIX C